

## **REMARKS**

Claims 1-19 are pending in the Application. Claims 1, 9, 16 and 17 have been amended to clarify the present invention. No new matter has been added.

### **Claims Rejections – 35 USC § 102**

Claims 1-3, 5, 7-8 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheng et al. (US 6,731,314). Applicant disagrees with the Examiner's interpretation of the system disclosed by Cheng et al.

#### **Cheng, U.S. Patent 6,731,314**

Cheng discloses a computer program that instructs a processor to locate and retrieve rich media and HTML (Hyper Text Markup Language) files over a network for running in a three dimensional (3D) graphical user interface (GUI). The program provides instructions to the processor to generate the 3D graphical user interface on a display. One or more users can then be represented as user objects which can navigate and interact in three dimensions within the 3D GUI environment through the use of navigational and interactive inputs from a user. The rich media can be, for example, a viewing screen wherein images are displayed for viewing by the users within the environment; see col. 2, lines 26-59. The invention disclosed by Cheng et al. is essentially a software platform made up of a number of software executables, software plugins, software scripts, communication protocols and file formats. These elements work together to form a 3D, collaborative shared environment for immersively browsing compelling local and remote content and communicating with other members of a community made up of server-browser interconnections; see col. 4, lines 3-11. Cheng et al. refers to this community as the Muse community. The invention disclosed by Cheng et al. is therefore a browser that has various characteristics and components including a 3D Visualization component for rendering complex, dynamic 3D worlds; col. 6, lines 61-63. The Muse browser also has a 3D GUI Tool Kit that gives the browser the capability

to create usable applications in a 3D environment; see col. 11, lines 44-46. The 3D GUI Tool Kit has a window manager for managing cut/past clip boards, drag and drop messages, display authentication and other tasks; see col. 12, lines 19-32. The window manager has a modular replaceable input model component which allows a user to perform different types of interactions within a 3D environment. The input model describes how an entity affects a 3D environment. The input model is designed to distill input device actions to events in the Muse browser. These events include grabbing and releasing objects, rotating, translating and scaling objects.... See col. 12, lines 33-61. The Muse browser also has a Muse animation engine to animate objects in a number of ways. One of the ways objects are animated is to use key frame animation. Specifically, various animation attributes would be associated to an object and when invoked the animation engine would audition the particular attributes for a particular object. See col. 12, line 64 to col. 13, line 10.

In sum, Cheng et al. disclose a browser program that is able to interact within a 3D environment using a 3D GUI system. Cheng is thus totally different from applicant's claim invention as recited in independent claims 1, 9, 16 and 17. A brief description of the system of the present invention describing its basic components follows. A discussion of how these components are caused to interact with each other to create a virtual reality episode between users is then described. Such components and their interaction are not disclosed, suggested or even implied in Cheng et al.

The independent claims of applicant's invention all recite a virtual reality system having a virtual reality environment Episode Management Entity (VEME) that is part of or in communication with a Virtual reality environment Core system (VCS). The VEME forwards virtual reality data **representing an environment** to virtual reality environment user equipment (VUE) to facilitate a virtual reality episode. The virtual reality system represents a Virtual Reality Environment (VRE). The basic component of the virtual reality system of the present invention are thus the VUE, VCS and VEME; these components are used to create a virtual reality episode that can be shared by one or more users over a wireless network.

(1) VUE (Virtual reality environment User Equipment)—represents one or more point devices used by one or more users to transmit virtual reality data describing an Actual Physical Environment (APE) and/or to receive data for establishing a VRE episode. A VRE episode is the presentation of virtual reality data to a user via a VUE where virtual reality data includes audio, video, textual and like data representing an environment such as an actual environment; page 3, lines 9-12 of the specification. The VUE 104 may comprise hardware, software, or a combination thereof. The VUE 104 may be a handset, headset, helmet, gloves, bodysuit, desk, chair, keyboard, mouse, screen, video, camera recording device, mechanical armature, ultrasonic sensor, magnetic tracker, optical position tracking system, or similar equipment well known in the art for displaying, transmitting and/or receiving information representative of an APE. It should be appreciated by those of ordinary skill in the art that the VUE 104 may comprise any combinations of such tools. The VUE **captures and displays virtual reality data**, which includes audio and video data that represents an environment, such as an actual physical environment; see page 8, line 25 to page 9, line 6 of the specification.

(2) VCS (Virtual reality environment Core System)—a backbone system that, in conjunction with the VUE and an intermediate component of the VRE system called a VAS, forms the VRE system to facilitate establishment of VRE episodes between diverse users and APEs that may be geographically distant. Each VCS includes one or more network communication elements facilitating the communication between VUEs and other elements of the system; see page 9, line 30 to page 10, line 3 of the specification.

A VCS includes three primary elements: (i) a Serving VRE Episode Control Entity (S-VECE); (ii) a Proxy Episode Control Entity (P-VECE) and (iii) a VRE Subscription Database (VSD); see page 12, lines 5-7 of the specification. Before explaining the functions of these three elements, it is necessary to explain that there are two types of VCS's: a Home VCS (H-VCS) and a Visitor VCS (V-VCS).

### Home VCS

The Home VCS and the Visitor VCS are similar in concept to a Home Location Register (HLR) and a Visitor Location Register (VLR) used in wireless communication systems. The Home VCS is a VCS with which the user and/or VUE has a pre-established relationship. The Home VCS recognizes the user and/or VUE and maintains rules that govern the user's or VUE's activities in the system. For instance, the Home VCS maintains rules that indicate whether a user or VUE is authorized to participate in or establish a virtual reality episode, and if so, to what extent the user or VUE may be involved. The Home VCS also maintains rules indicating the type of information that may be sent to the VUE based upon the capability of the VUE to receive certain types of information. Therefore, it will be appreciated that the Home VCS will include a processor, in communication with at least one look-up table or database, for storing and retrieving rules associated with a user or VUE that has a relationship with the Home VCS. Furthermore, the Home VCS includes a database that contains all the VRE service subscription information related to the user and/or the VUE. See page 10, line 19 to page 11, line 2 of the specification.

### VISITOR VCS

A Visitor VCS is the network system with which the VUE is presently visiting and in communication. It is the VCS with which the user and/or the user's VUE does not have a subscription affiliation. For instance, where the VUE is a wireless device, a visitor VCS is comparable to a wireless visitor network that does not include a home location register for the wireless device. It will be appreciated by those of ordinary skill in the art that a wireless VUE can move in between multiple visitor VCSs when the wireless device is in motion. Therefore a handoff function is performed when the user and/or VUE switches visitor systems, where the handoff function is similar to that handoff performed when a cellular or wireless telephone moves between cells. The home VCS, however, remains the same for a given user and/or VUE regardless of its location in the system. Additionally, because a VCS may be in communication with multiple

user' VUEs, a VCS can simultaneously act as a home VCS for one user and a visitor VCS for another user, where the prior user has subscription with the VCS and the latter user does not. Because the system allows a user to participate in a virtual reality episode regardless of each persons location (including while in motion), virtual reality episodes are available for virtually every for whom there is VUE. See page 11, lines 5-21 of the specification.

(i) Serving VRE Episode Control Entity (S-VECE)

The S-VECE is one of the elements of the VCS. The function of the S-VECE is to control the virtual reality episode by keeping track of the VUE's status such as the VUE's location, connectivity and the like. The S-VECE authenticates the VUE and queries the VUE's VSD for the services that can be offered to the VUE during a VRE episode. Furthermore, during a virtual reality episode, the S-VECE maintains the current P-VECE to which the VUE is in communication such that the S-VECE can forward messages to the VUE via GWEs (Gateway Entities); see page 12, line30 to page 13, line 5.

(ii) Proxy Episode Control Entity (P-VECE)

The P-VECE is another element of the VCS. A P-VECE is assigned to attend and monitor on behalf of the S-VECE all requests received from and transmitted to the VUE. These requests include requests to join a virtual reality episode, requests for virtual reality data, and similar requests associated with participation in a virtual reality episode. The P-VECE performs this function because the VUE does not have a pre-established relationship with the VCS; see page 12, lines 20-25. It will be appreciated that unlike the S-VECE, which remains the same during the time that a VRE service episode is in process, the P-VECE does not necessarily remain the same, as the VUE may move within the V-VCS or from the V-VCS to another, depending upon the mobility range of the VUE; see page 13, lines 6-9.

(iii) VRE Subscription Database (VSD): a database that contains subscription information data for the VUEs. Upon recognizing the request for establishing a VRE episode and obtaining the VUE's service subscription information data from the VSD, the S-VECE sends a request for VRE episode set-up to the VEME; see page 15, lines 9-11.

(3) VRE EPISODE MANAGEMENT ENTITY (VEME) – A VEME is an entity that manages, coordinates, synchronizes, and maintains all of the events and VRE users' links within a VRE episode. As such, the VEME is a multimedia management, control and operations center interfacing with the S-VECE of each VUE and the S-VECE of each actual physical environment (APE) that is involved in the virtual reality episode; see page 14, lines 6-11. The VEME performs various functions including initiation of a VRE episode, negotiations for the type and class of VRE services, maintaining the procession of the episode, adding and/or dropping a VUE to/from established episode, terminating the episode, and finally collecting charging data (from participating S-VECEs) and preparing a single charging record for the originating party(ies) as well as other participants; see page 14, lines 12-19.

The present invention includes many programs running on multiple PC's which may not be local to one another whereas Cheng provides a client/server (browser) based architecture with the client running a single program GUI on a PC. Moreover, our invention provides VUE 's that capture and display virtual reality data—no such VUE's are disclosed in Cheng. The citations made by the Examiner regarding the VUE, VCS and the VEME simply do not recite these entities as described above. Thus, Cheng does not have a VUE or VCS as described above and certainly does not have a VEME as described above and in the originally filed application. Consequently, Cheng fails to teach independent claims 1 and 16 and dependent claims 2-3, 6 and 7-8 and thus does not anticipate the claimed invention for at least the above reasons.

### **Claims Rejections – 35 USC § 102**

Claims 17-19 have been rejected under 35 USC §102(e) as being anticipated by French et al. (U.S. Patent no. 6,308,565). Applicant respectfully disagrees with the Examiner's reading of French as applied to the claimed invention.

French U.S. Patent 6,308,565

The French reference describes a system 10 that allows a user represented by icon 32 to interact with an opponent represented by icon 34. Like the system of Cheng above, the French system does not facilitate the setup and conduction of a virtual reality episode in real time as contemplated by the present invention. In contrast to French, the present invention provides a system including a user device that captures and displays virtual reality data representing a virtual reality environment to facilitate a virtual reality episode. As explained above, although French discloses a computer system, it fails to disclose a device that captures and display virtual reality data allowing users to engage in a virtual reality episode as disclosed by the present invention. Consequently, French fails to teach independent claim 17 and dependent claims 18-19 and thus does not anticipate the claimed invention for at least the above reasons.

**Claims Rejections – 35 USC § 103**

Claims 4, 6 and 9-15 have been rejected under 35 USC § 103(a) as being unpatentable over Cheng in view of French.

As outlined above in response to the Examiner's rejection under 35 USC § 102(e), Cheng does not anticipate independent claim 1. Thus, for at least the same reasons as claim 1, Cheng fails to teach or suggest respective dependent claims 4 and 6 of the present invention. Moreover, as explained above French fails to anticipate independent claim 17. Claim 9 recites similar subject matter as claim 17 and thus French fails to teach or suggest claim 9 for at least the same reasons as claim 17. Therefore, Cheng, alone or in combination with French, fails to teach or suggest claims 4, 6 and 9-15.

**Request for Reconsideration pursuant to 37 CFR 1.111**

Having responded to each and every ground for objection and rejection in the Office Action mailed on May 31, 2005, Applicant requests reconsideration in the instant application pursuant to 37 CFR 1.111 and requests that the Examiner allow claims 1-19 and pass the application to issue. Please charge any fee due to our Deposit Account No. 50-1561, and reference Attorney Docket No. 29633.046500. If there is any point requiring further attention prior to allowance, the Examiner is asked to contact Applicants' counsel who can be reached at the telephone number listed below.

Respectfully,  
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